

Amendments to the Claims

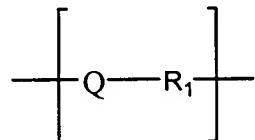
Please cancel Claim 6. Please amend Claims 1, 2, 7, 9, 10, 11, 13, 15, 20, 25 and 30.

Please add new Claims 33 and 34. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

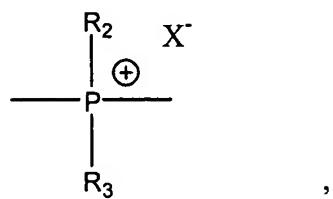
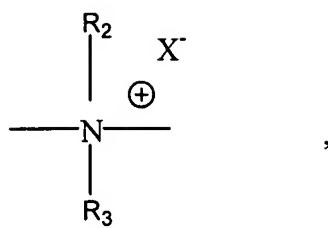
1. (Currently amended) A method of treating oral mucositis in a mammal comprising administering to said mammal an effective amount of an ionene polymer.

2. (Currently amended) A method of treating oral mucositis in a mammal comprising administering to said mammal an effective amount of an ionene polymer characterized by a repeat unit having the formula:



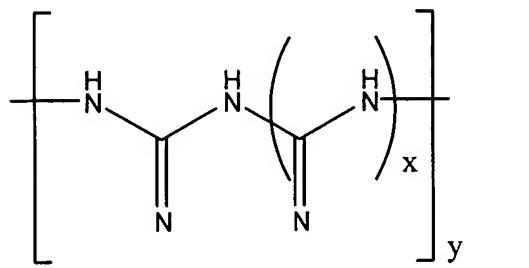
wherein R₁ is a substituted or unsubstituted hydrocarbyl group; and each Q is independently:

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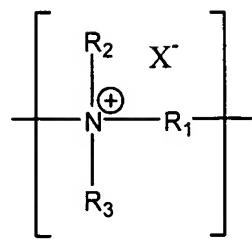
—Cy₁—

—Cy₁—A—Cy₂— , or

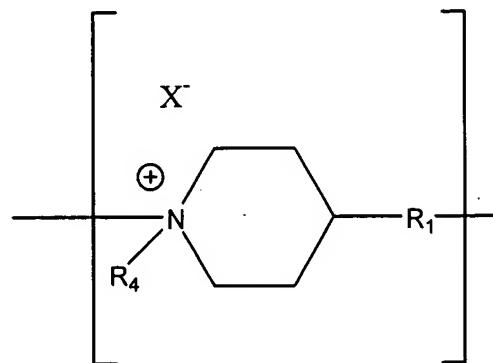


wherein Cy₁ and Cy₂ are each independently a quaternary nitrogen-containing monocyclic heteroaromatic ring or non-aromatic heterocyclic ring, A is a covalent bond, or a substituted or unsubstituted lower alkylene group, and R₂ and R₃ are independently a substituted or unsubstituted aliphatic or aromatic group; each X⁺, separately or taken together with other X's, is a physiologically acceptable anion; x is an integer from 0-4; and y is an integer from 1-5.

3. (Original) The method of Claim 2, wherein said ionene polymer is administered therapeutically.
4. (Previously presented) The method of Claim 2, wherein said ionene polymer is administered to inhibit the onset of musositis.
5. (Original) The method of Claim 2, wherein R₁ is a substituted or unsubstituted arylene or lower alkylene group.
6. (Canceled)
7. (Currently amended) The method of Claim [[6]] 2, wherein said oral mucositis is a side effect of anti-cancer therapy.
8. (Original) The method of Claim 7, wherein said anti-cancer therapy is chemotherapy or radiation therapy.
9. (Withdrawn-currently amended) The method of Claim [[6]] 2, wherein said oral mucositis is a side effect of bone marrow transplantation or stem cell transplant or ablation.
10. (Currently amended) The method of Claim [[6]] 2, wherein each R₂ and R₃ are each independently an alkyl group or a hydroxyalkyl group.
11. (Withdrawn-currently amended) The method of Claim [[6]] 2, wherein said repeat unit has the formula:

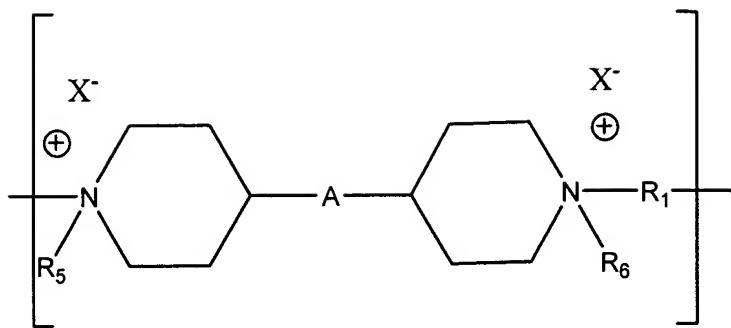


12. (Withdrawn) The method of Claim 11, wherein R₁ is a substituted or unsubstituted straight chained lower alkylene group or polyalkylene glycol optionally substituted with one or more -OH groups.
13. (Withdrawn-currently amended) The method of Claim [[6]] 2, wherein said repeat unit has the formula:



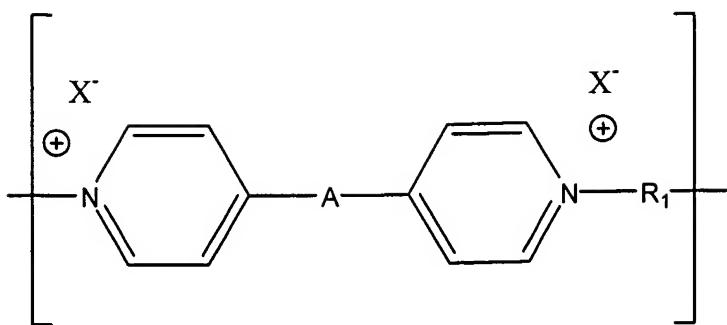
wherein R₄ is hydrogen or a substituted or unsubstituted lower alkyl group.

14. (Withdrawn) The method of Claim 13, wherein R₄ is a lower alkyl or hydroxy substituted lower alkyl.
15. (Withdrawn-currently amended) The method of Claim [[6]] 2, wherein said repeat unit has the formula:



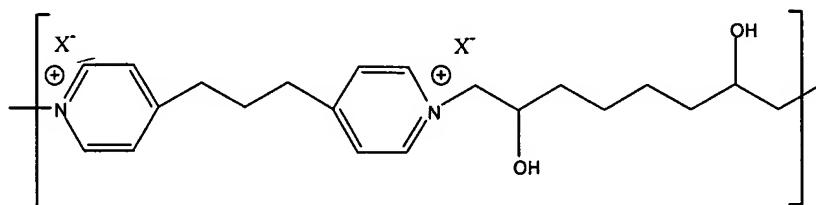
wherein A is a bond or substituted or unsubstituted lower alkylene group, and wherein R₅ and R₆ are each independently hydrogen or a substituted or unsubstituted lower alkyl group.

- 16. (Withdrawn) The method of Claim 15, wherein R₅ and R₆ are each independently an alkyl group or a hydroxyalkyl group.
- 17. (Withdrawn) The method of Claim 16, wherein A is an unsubstituted straight chained lower alkylene group.
- 18. (Withdrawn) The method of Claim 17, wherein R₁ is a substituted or unsubstituted straight chained lower alkylene group or polyalkylene glycol optionally substituted with one or more -OH groups.
- 19. (Withdrawn) The method of Claim 18, wherein R₁ is an unsubstituted polyalkylene glycol or
-CH₂CHOH(CH₂)_nCHOHCH₂- wherein n is an integer from 0 to 8.
- 20. (Currently amended) The method of Claim [[6]] 2, wherein said repeat unit has the formula:

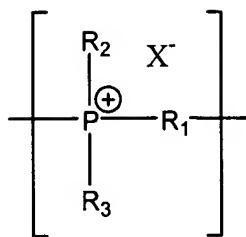


wherein A is a bond or substituted or unsubstituted lower alkylene group.

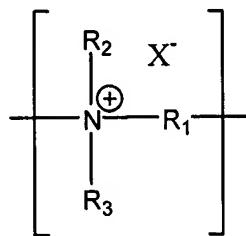
21. (Original) The method of Claim 20, wherein A is an unsubstituted straight chained lower alkylene group.
22. (Original) The method of Claim 21, wherein R₁ is a substituted or unsubstituted straight chained lower alkylene group or polyalkylene glycol optionally substituted with one or more -OH groups.
23. (Original) The method of Claim 22, wherein R₁ is an unsubstituted polyalkylene glycol or -CH₂CHOH(CH₂)_nCHOHCH₂- wherein n is an integer from 0 to 8.
24. (Original) The method of Claim 23, wherein said repeat unit has the formula:



25. (Withdrawn-currently amended) A method of treating oral mucositis in a mammal, comprising administering to said mammal an effective amount of an ionene copolymer characterized by a repeat unit of the formula:

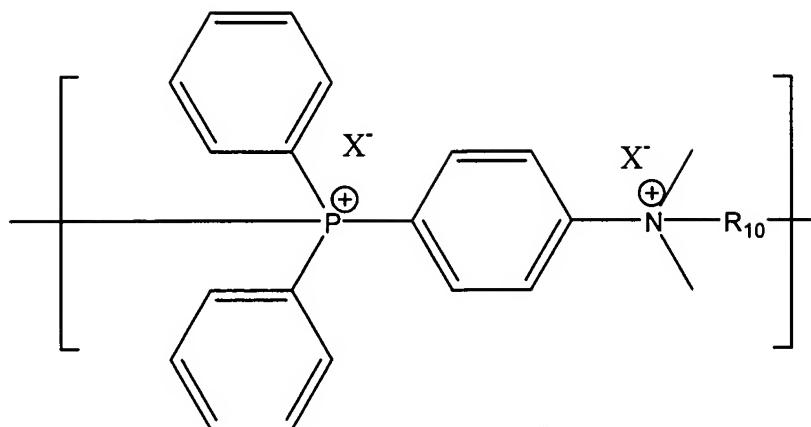


and a repeat unit of the formula:



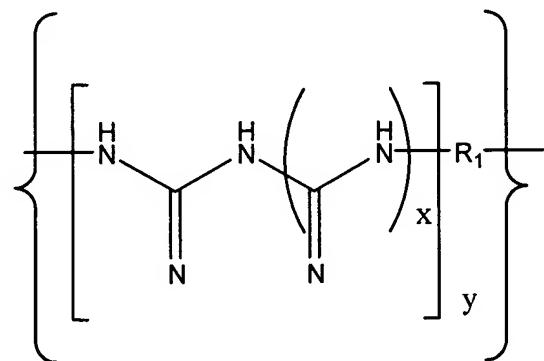
wherein R_1 is a substituted or unsubstituted hydrocarbyl group; R_2 and R_3 are independently a substituted or unsubstituted aliphatic or aromatic group; and each X^- in the polymer or copolymer, separately or taken together with other X^- 's, is a physiologically acceptable anion.

- 26. (Withdrawn) The method of Claim 25, wherein said mucositis is oral mucositis.
- 27. (Withdrawn) The method of Claim 26, wherein said oral mucositis is a side-effect of anti-cancer therapy.
- 28. (Withdrawn) The method of Claim 27, wherein the anti-cancer therapy is chemotherapy or radiation therapy.
- 29. (Withdrawn) The method of Claim 25, wherein said polymer or copolymer is comprised of repeat units of the formula:

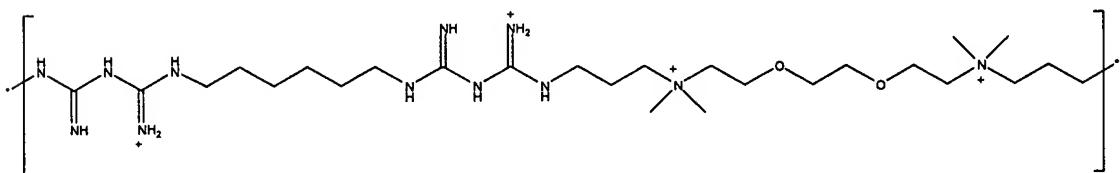


wherein R_{10} is a substituted or unsubstituted lower alkylene group having from about 4 to about 12 carbon atoms and each X^- , separately or taken together with other X^- 's is a physiologically acceptable anion.

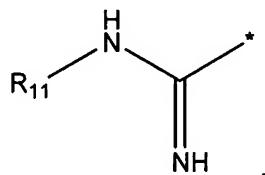
30. (Withdrawn-currently amended) The method of Claim [[6]] 2, wherein said polymer is characterized by repeat units of the formula:



31. (Withdrawn) The method of Claim 30, wherein said copolymer is characterized by the formula:



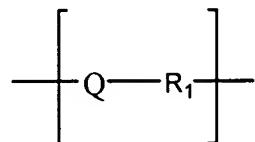
32. (Withdrawn) The method of Claim 30, wherein one or both ends of the polymer or copolymer is capped with a group represented by the formula:



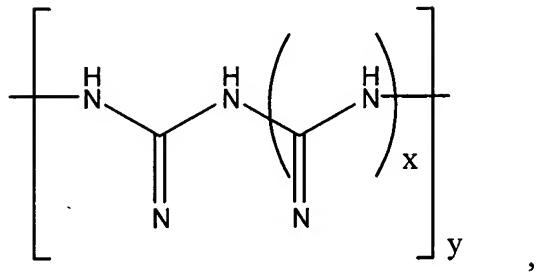
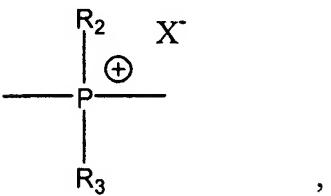
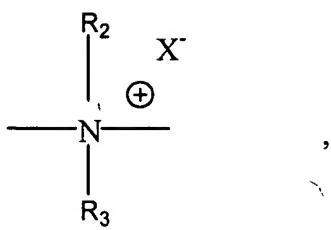
wherein R_{11} is a C2-C90 alkyl, C2-C90 oxyalkyl, or aromatic group and the symbol "*" represents the bond connecting the cap to the polymer or copolymer.

33. (New) A method of treating mucositis in a mammal comprising administering to said mammal an effective amount of an ionene polymer wherein said ionene polymer is administered to inhibit the onset of musositis.

34. (New) The method of Claim 33, wherein the ionene polymer characterized by a repeat unit having the formula:



wherein R_1 is a substituted or unsubstituted hydrocarbyl group; and each Q is independently:



wherein Cy₁ and Cy₂ are each independently a quaternary nitrogen-containing monocyclic heteroaromatic ring or non-aromatic heterocyclic ring, A is a covalent bond, or a substituted or unsubstituted lower alkylene group, and R₂ and R₃ are independently a substituted or unsubstituted aliphatic or aromatic group; each X⁻, separately or taken together with other X⁻s, is a physiologically acceptable anion; x is an integer from 0-4; and y is an integer from 1-5.